

How Green Saves Business \$\$

South Carolina Energy Office



BUSINESS RULES & ONLINE TOOLS WORKSHOP

S.C. Energy Office Mission

To increase energy efficiency and diversity,
enhance environmental quality and save
energy dollars for South Carolina.



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Making the Case for Greening:

- Generally saves money
- Generally reduces greenhouse gas emissions
 - May become increasingly important in future
 - Some cities already paying attention
- May provide a PR boost, or a way of differentiating your product or service from competitors



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Making the Case for Greening: Industry

- Over the 10 years the S.C. Environmental Excellence Program has been in existence, members have:
 - Reduced waste disposal at landfills by 67.1 tons
 - Saved enough energy to power 150,327 average households for a year
 - Saved enough water to serve 111,603 households for 1 year
 - Landfill tipping fees and utilities cost money—resources saved = money saved



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Making the Case for Greening: Commercial

- Energy management is proxy for overall organizational management
- Recent studies by Innovest Strategic Value Advisors found that leaders in energy management achieved superior stock and financial performance over laggards. Difference between leaders and laggards is significant:
 - Real estate investment sector — over 3,400 basis points difference
 - Retail food sector — 1700 basis points difference
 - Retail merchandising — 7100 basis points difference



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Where to Start?

- Assess
- Tools:
 - www.energystar.gov/ (“Buildings and Plants”)
 - www.eere.energy.gov (“Consumers” then “Your workplace”)
- Action Plan
 - Begin with low hanging fruit
 - Calculate expected savings to assess true costs of implementation
 - Think strategically



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Where to Start?

- Insulate, close gaps, seal ductwork
- Right-size fans, chillers, HVAC
- Change behavior



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Energy savings – at the office

- **Computers**

- screen savers not the answer
- inkjet versus laser printers
- laptops vs desktops
- energy-saving mode
- turn off



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IT Energy Savings Calculator

- Tool:
http://www.energystar.gov/ia/products/power_mgmt/LowCarbonITSavingsCalc.xls
- Sample: 50 desk top computers, all energy star, all set to sleep and hibernate, would save 9,943.7 kWh/year, or \$792.52
- Eliminates 22.9 tons of CO₂, equivalent to planting 4.72 trees or taking 3.8 cars off the road



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Energy savings – at the office

- **Lighting**

- lights off – especially if day lighting is adequate
- efficient lights—cfls, T-8 fluorescents
- motion sensors
- task lighting



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Energy savings – at the office

- **Paper**

- Scratch paper for drafts
- Double-sided printing
- Is printing necessary?
- Recycling



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Calculating annual savings

Usage: Determine the number of hours of use

Determine the watts used by electrical equipment

No. of hours per week x No. of weeks = Annual hours

Annual hours x No. of watts ÷ 1000 * = No. of kWh

No. of kWh x Cost per kWh ** = savings per year



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Calculating annual savings

- **Example:** removing space heater
- **Data:**
Operation: 2000 watts of electricity (typical)
- **Assumptions:**
Usage: mid Oct. - end of Feb.
40 hrs./week x 20 weeks = 800 hrs.

 $(800 \text{ hrs.} \times 2000 \text{ watts}) \div 1000 = 1,600 \text{ kWh}$

 $1,600 \text{ kWh} \times \$0.06 = \text{saves } \$96.00/\text{year}$



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Calculating annual savings

Example: turning off lights in conference room when unused

- **Data:**
4- lamp luminaire: 34W lamp, ES magnetic ballast (*576 watts total)
- **Assumptions:**
Unoccupied 50% of time (20 hours/week, 50 wks./yr.).
- 20 hrs./week x 50 weeks = 1000 hrs.

$$(1000 \text{ hrs.} \times 576 \text{ watts}) \div 1000 = 576 \text{ kWh}$$

$$576 \text{ kWh} \times \$0.06 = \text{saves } \$34.56/\text{year}$$

* Includes ballast loss



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How energy savings can add up:

Example:

Facility: 201,476 sq. ft.

• 250 Space Heaters	\$ 96.00... \$ 24,000.00
• 25 Copier Rooms	\$ 19.28... \$ 482.00
• 200 Offices with Daylighting	\$ 25.96... \$ 5,192.00
• 500 *Computers & Monitors	\$ 21.30... \$ 10,650.00
• 1 Training Room	\$ 64.70... \$ 64.70
• 7 Conference Rooms	\$ 34.56... \$ 241.92

Total annual savings: \$40,630.62



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When Building or Remodeling

- Consider green building techniques
 - Edisto State Park education center saves 215,000 gallons of water/year and 1040 kWh energy/year
 - QS1 in Spartanburg, LEED certified, saves \$113,000/year in energy costs



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When Building or Remodeling

- Owner of new Just Fresh restaurant in Charleston saved on impact fees because facility uses 36% less water
- Cox and Dinkins, Columbia engineering firm, built LEED certified, saving about \$3,500/year in energy costs



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What About Renewables?

- Consider solar, etc. only after you have insulated, closed gaps, sealed ducts
- Then, visit www.energy.sc.gov for information about tax credits, installers, etc.
- If you own a “renewable” business, or want to start one, contact S.C. Energy Office for information about tax credits and One Stop Shop for permitting and other information



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SCEO assistance for efficiency

- Energy assessments and “greening” advice
- State chapter of NAEESCO, energy service companies
- Workshops
- Legislative Tracking



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Other Sources of Assistance

- S.C. Chapter of the U.S. Green Building Council, for advice on building or renovating “green”
www.usgbcsc.org
- Green products and services – Find services or list your company at
<http://www.scgreenbuildingdirectory.org/>
- DHEC Small Business Ombudsman



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Other Sources of Assistance

- S.C. Manufacturers Extension Partnership has grant to reduce energy use for mid-sized manufacturers
 - Energy assessments to reduce use by 5% per company
 - Contact Vivian Harper (803) 252-6976 ext. 229 to apply
- Website has lots of helpful information—visit www.energysc.org



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Consider Affiliations

- Green Business certification through City of Columbia in the midlands
- Environmental Excellence Program through DHEC
- Green Power purchases through Palmetto Clean Energy or Co-ops



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For more information:
South Carolina Energy Office
1200 Sumter Street
408 Wade Hampton Building
Columbia, S.C. 29201
(803) 737-8030



www.energy.sc.gov

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Business Recycling

S.C. Smart Business Recycling Program
DHEC



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Smart Business can help your organization recycle and reduce waste!

- Site visits
- Technical assistance
- Market research and vendor contacts
- Workshops
- Recognition program



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Why Recycle?

- Save money in avoided disposal costs
- Save natural resources, energy and landfill space
- Recycling benefits S.C.'s economy



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Starting a Waste Reduction/Recycling Program

- Gain support from management
- Form a recycling team
- Conduct a waste audit
- Contact potential vendors



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Starting a Waste Reduction/Recycling Program

- Educate Employees
- Buy Recycled
- Track progress
- Report efforts local government



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What are Your Options?

- Check with your local government
- Check with your current hauler
- Call Smart Business for assistance



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Contact Us

1-800-768-7348

Smartbiz@dhec.sc.gov

www.scdhec.gov/smartbusiness



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2009 Earth Day Awards and SC Green Guide

South Carolina Department of
Health and Environmental
Control (DHEC)

Stacey R. Gardner, MPH



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Earth Day Awards

Purpose of Program

DHEC will annually recognize SC citizens or businesses that have actively embraced the spirit of Earth Day through implementation of sustainable, environmentally-conscious practices or programs that improve or protect our state's environment



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Award Categories

- Four categories of awards will be given:
 - **Large Business/Entity** (50 or more participants)
 - **Medium Business/Entity** (11 to 49 participants)
 - **Small Business/Entity** (two to 10 participants)
 - **Individual**
- Winners honored for projects or programs implemented in previous calendar year



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Eligible Projects

- 2009 DHEC Earth Day Awards will be given for projects conducted during 2008
- Projects must:
 - Visibly document energy conservation, waste reduction, pollution prevention or otherwise encourage environmentally-conscious practices
 - Demonstrate sustainability in application



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Judging

- Entries reviewed by DHEC Earth Day Awards Committee
- Scoring based on degree project/program demonstrates “making Earth Day every day”
- Awards presented to top candidates in each category on Earth Day (April 22, 2009)



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Information on Applying

- Deadline for 2009 awards is Feb. 13, 2009
- E-mail entries to:

earthdayawards@dhec.sc.gov

- Mail-in applications sent to:
SCDHEC – Commissioner's Office
Earth Day Awards Committee
2600 Bull Street
Columbia, SC 29201



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Online Resources

- Earth Day Awards Program Information

<http://www.scdhec.net/environment/earthday/awards.htm>

- Earth Day Awards Online Entry Form

<http://www.scdhec.gov/environment/earthday/docs/d-1039.pdf>



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SC Green Guide

- New environmental magazine designed to help SC citizens “go green”
- Highlights in first issue:
 - Air is everywhere! So are the problems and solutions
 - It's just right to recycle
 - South Carolina's coastline provides opportunities, challenges
 - Safe drinking water: Who's responsible?



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SC Green Guide, cont.

- Other Information:
 - Compact fluorescent light bulbs
 - Protecting your home from radon
 - Tips for taking hazards out of household products
 - Ways to conserve water
- “Our environment. Our responsibility.”



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Where to Find SC Green Guide

Online:

<http://www.scdhec.gov/administration/library/ML-025396.pdf>

Hard copies:

Call 1-800-768-7348



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Contact Information

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